



## Factors Related to Postpartum Mothers Knowledge of Exclusive Breastfeeding in the Tuntungan Health Center Work Area, Pancur Batu Subdistrict

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**Abstract.** The 2023 Indonesian Health Survey stated that the proportion of exclusive breastfeeding in Sumatera Utara Province was quite low, namely 43.9%. The low coverage of exclusive breastfeeding is closely related to the lack of knowledge of postpartum mothers, which is a predisposing factor that encourages mothers to only give breast milk for 6 months to their babies. The purpose of this study was to determine the factors related to postpartum mothers' knowledge of exclusive breastfeeding in the Tuntungan Health Center work area, Pancur Batu Subdistrict. This study was an observational analytic study with a cross-sectional design. The sample in the study were postpartum mothers in the Tuntungan Health Center work area who met the inclusion and exclusion criteria, namely 50 people. The data collected were primary data obtained through questionnaires distributed to postpartum mothers. Bivariate analysis was carried out using the chi-square test to determine the relationship between the independent and dependent variables. Based on the study conducted, it is known that there is a relationship between age ( $p$ -value = 0.015), education ( $p$ -value = 0.026), and parity ( $p$ -value = 0.008) with postpartum mothers' knowledge of exclusive breastfeeding. There is no relationship between occupation ( $p$ -value = 0.224) and postpartum mothers' knowledge of exclusive breastfeeding. It is recommended that health workers in the Tuntungan Health Center work area, Pancur Batu Subdistrict, to improve the knowledge of postpartum mothers, especially for young mothers (<20 years) and primigravida mothers. It is also recommended that postpartum mothers improve their knowledge through various media, especially social media.

**Keywords:** knowledge, exclusive breastfeeding, age, education

### 1. INTRODUCTION

Exclusive breastfeeding for the first six months of a baby's life is one of the most important steps in ensuring optimal growth and development and reducing infant morbidity and mortality. Breast milk provides all the nutrients a baby needs and protects them from various infectious diseases. However, in many regions, including Indonesia, the rate of exclusive breastfeeding is still low (1)Based on data from the Ministry of Health, exclusive breastfeeding coverage in Indonesia in 2020 only reached 69.8%, still below the global target set by WHO, which is 70%. The latest data on exclusive breastfeeding coverage in Indonesia for 2023 has decreased. Exclusive breastfeeding coverage for infants aged 0-5 months is 68.6% and for infants aged 6-23 months is 55.5%. Based on the results of the 2023 Indonesian Health Survey, the percentage of infants who received exclusive breastfeeding in North Sumatra Province was 43.9%. This figure is still below the national target set by the government regarding exclusive breastfeeding coverage of 80% (2)

During pregnancy, especially the third trimester, mothers begin to prepare for the birth process and make plans for providing baby nutrition, including the decision to provide exclusive breastfeeding. Postpartum mothers' knowledge and attitudes regarding exclusive breastfeeding play an important role in ensuring the success of exclusive breastfeeding (3). There are many factors that cause failure in providing exclusive breastfeeding such as socio-economic conditions, lack of social support, prevailing social norms, shame, and health services. In addition, the mother's work and knowledge factors play an important role in the practice of providing exclusive breastfeeding. Mothers. Mothers who have knowledge about exclusive breastfeeding have a 5.67 times greater chance of success in providing exclusive breastfeeding compared to mothers who do not know about exclusive breastfeeding (4).

Various studies show that many postpartum mothers still have not good knowledge regarding exclusive breastfeeding. As many as 63.3% of postpartum mothers in Akbar's study (2021) had not good knowledge and 65.8% were unsuccessful in providing exclusive breastfeeding (5). Another study by Delima (2020) of 72% of respondents who did not provide colostrum, 51% of which was due to not good knowledge possessed by mothers (6). Mothers' knowledge and understanding of colostrum is one aspect to consider when giving colostrum or not (7).

Breast milk has an important role in children's growth and development. Children who are breastfed for 2 years have higher immunity than children who do not receive breast milk for 2 years. As a result, children often get sick, their growth and development tend to be slower. It is feared that this can trigger stunting. There needs to be an effort to increase the knowledge of postpartum mothers regarding the importance of colostrum and breast milk in order to create psychological, physical, self-confidence, and knowledge support for mothers (8).

Knowledge about exclusive breastfeeding is very important for postpartum mothers because it is closely related to the health of the mother and baby, as well as the long-term development of the little one. Exclusive breastfeeding, which means giving only breast milk without additional food or drink for the first six months of a baby's life, plays a vital role in meeting the nutritional and immunological needs of the baby. Breast milk contains natural antibodies that help protect babies from various infectious diseases, such as diarrhea, respiratory infections, and other diseases. In addition, breast milk also contains complete nutrients that are easily digested by babies, such as healthy fats, proteins, vitamins, and minerals, which contribute to the optimal physical growth and brain development of the baby (9).

Exclusive breastfeeding also provides important benefits for the mother, both physically and emotionally. Physically, breastfeeding helps the uterus contract back to its normal size more quickly and reduces the risk of postpartum hemorrhage. Breastfeeding can also delay the return of ovulation, which plays a role in regulating birth spacing. In addition, mothers who exclusively breastfeed tend to have a lower risk of breast and ovarian cancer, as well as osteoporosis later in life. Emotionally, breastfeeding creates a strong bond between mother and baby, providing a sense of closeness and security for both (10).

However, although the benefits of exclusive breastfeeding are very clear, not all mothers have sufficient knowledge about it. It is important for postpartum mothers to get the right education about breastfeeding techniques, breast milk production, and how to deal with challenges such as sore nipples or breast milk that does not come out smoothly immediately. Support from health workers, such as midwives or lactation counselors, is very important in this process. Sufficient knowledge about exclusive breastfeeding can also reduce anxiety and stress that may arise, and help mothers feel more confident in providing the best nutrition for their babies. Therefore, disseminating adequate information about the importance of exclusive breastfeeding should be part of holistic postpartum care to ensure the well-being of mothers and babies is maintained (10)(11).

Mothers' knowledge about exclusive breastfeeding is influenced by various interrelated factors, both in terms of individuals, the environment, and the health system. Education is one important element that influences the extent to which a mother understands the benefits and techniques of exclusive breastfeeding. Mothers with higher levels of education tend to have better access to scientific information, health articles, and resources on infant nutrition. They also more easily understand the importance of exclusive breastfeeding as part of optimal infant growth and development. Conversely, mothers with lower levels of education may have difficulty understanding more technical information and require simpler and more direct education (12)(13).

Age also has a significant role in influencing mothers' knowledge and understanding of exclusive breastfeeding. In younger mothers, knowledge of exclusive breastfeeding tends to be more limited due to lack of experience in caring for babies. Due to this limited experience, young mothers may not fully understand the correct breastfeeding techniques and the importance of exclusive breastfeeding for the first six months of a baby's life. In addition, they may also be influenced by trends or less valid information from social media, which can add to their confusion. In contrast, older mothers tend to have better knowledge of exclusive

breastfeeding, especially if they already have experience breastfeeding their previous children (14)(15).

Parity or the number of births a mother has ever had is one of the important factors that influence a mother's knowledge and attitude about exclusive breastfeeding. Primiparous mothers (mothers who have just given birth for the first time) often have less experience in breastfeeding, because this is their first experience caring for a baby. They tend to feel anxious and confused about the correct breastfeeding techniques and the importance of providing exclusive breastfeeding for the first six months. This limited experience makes primiparous mothers very dependent on information from health workers, family, or the media to obtain adequate knowledge (16). In addition, they may also be more susceptible to external influences, such as false myths about breastfeeding or encouragement to use formula earlier. On the other hand, multiparous mothers (mothers who have had more than one child) usually have previous experience that can help them better understand the importance of exclusive breastfeeding. However, it is important to note that although multiparous mothers have more experience, this experience is not always based on good practice or current health recommendations. If they were accustomed to giving complementary foods earlier or using formula with their previous child, there is a chance that they will repeat the same pattern with their next child (17).

Based on a preliminary survey conducted on 10 postpartum mothers in the Tuntungan Health Center work area, it was found that 40.0% did not know the benefits of exclusive breastfeeding for babies, 60.0% did not know the methods to increase breast milk production, 50.0% did not know about colostrum and its benefits. The results of the preliminary survey also stated that there were still around 20.0% of postpartum mothers aged <20 and 50.0% who had a parity of 1. Based on the background that has been described, it is necessary to conduct research to determine the factors related to postpartum mothers' knowledge of exclusive breastfeeding in the Tuntungan Health Center work area, Pancur Batu Subdistrict.

## **2. METHODS**

This study is an analytical observational study using a cross-sectional design. The population is all postpartum mothers who have lived in the Tuntungan Health Center working area for the last 6 months calculated from the date of data collection. The sample is some postpartum mothers who live in the Tuntungan Health Center working area who meet the inclusion and exclusion criteria. The number of samples in this study was 50 people taken using the cluster sampling technique. The inclusion criteria in this study were postpartum mothers who were registered at the Tuntungan Health Center and had lived in the Tuntungan Health

Center Working Area for the last 6 months and were willing to be respondents in this study. The exclusion criteria were postpartum mothers who had certain diseases and postpartum mothers who were health workers. This study used primary data where the primary data was obtained by interviewing respondents to determine the description of the independent variables and dependent variables. While the secondary data in this study in the form of the number of postpartum mothers and residential addresses were obtained from the Tuntungan Health Center. Data analysis used univariate analysis to determine the distribution and frequency of each variable studied including knowledge, education, age and parity, while bivariate analysis using the Chi-square test was carried out to determine the relationship between education, age and parity of postpartum mothers with knowledge.

### 3. RESULTS AND DISCUSSION

#### Univariate Analysis

**Table 1. Frequency Distribution of Age of Postpartum Mothers in the Tuntungan Health Center Working Area**

<b>Age (years old)</b>	<b>n</b>	<b>Percentage (%)</b>
<20	11	22.0
20-35	24	48.0
>35	15	30.0
<b>Total</b>	<b>50</b>	<b>100.0</b>

Based on the table above, it can be seen that there are more postpartum mothers aged 20-35 years, namely 24 people (48.0%) compared to postpartum mothers aged <20 years, namely 11 people (22.0%) and postpartum mothers aged >35 years, namely 15 people (30.0%).

**Table 2. Frequency Distribution of Education of Postpartum Mothers in the Tuntungan Health Center Working Area**

<b>Education</b>	<b>n</b>	<b>Percentage (%)</b>
Low	16	32.0
High	34	68.0
<b>Jumlah</b>	<b>50</b>	<b>100.0</b>

Based on the table above, it can be seen that more postpartum mothers have higher education, namely 34 people (68.0%) compared to postpartum mothers who have lower education, namely 16 people (32.0%).

**Table 3. Frequency Distribution of Parity of Postpartum Mothers in the Tuntungan Health Center Working Area**

Parity	n	Percentage (%)
≤2 people	32	64.0
> 2 people	18	36.0
<b>Jumlah</b>	<b>50</b>	<b>100.0</b>

Based on the table above, it can be seen that there are more postpartum mothers who have a parity of ≤2, namely 32 people (64.0%) compared to postpartum mothers who have a parity of >2, namely 18 people (36.0%).

**Table 4. Frequency Distribution of Parity of Postpartum Mothers in the Tuntungan Health Center Working Area**

Knowledge	n	Percentage (%)
Not good	27	54.0
Good	23	46.0
<b>Jumlah</b>	<b>50</b>	<b>100.0</b>

Based on the table above, it can be seen that more postpartum mothers have not good knowledge, namely 27 people (54.0%) compared to postpartum mothers who have good knowledge, namely 23 people (46.0%).

### Bivariate Analysis

**Table 5. Relationship between Age and Postpartum Mothers' Knowledge of Exclusive Breastfeeding in the Tuntungan Health Center Work Area**

Age (years old)	Knowledge				p
	Not Good		Good		
	n	%	n	%	
<20	8	72.7	3	27.3	0.015
20-35	10	41.2	14	58.2	
>35	9	60.0	6	40.0	

The table above shows that in postpartum mothers aged <20 years, more mothers have not good knowledge, namely 72.7%, in postpartum mothers aged 20-35 years, more mothers have good knowledge, namely 58.2%, in postpartum mothers aged >35 years, more mothers have not good knowledge, namely 60.0%. The results of the Chi-square statistical analysis

showed that there was a relationship between age and postpartum mothers' knowledge of exclusive breastfeeding in the Tuntungan Health Center Work Area with a p-value = 0.015.

A person's age affects their experience and exposure to health information, including the benefits of exclusive breastfeeding. As a person gets older, they tend to be more exposed to various sources of information, such as personal experience, social environment, and formal education, which enrich their knowledge about exclusive breastfeeding. Mothers aged 20-35 years tend to have a deeper understanding of the importance of exclusive breastfeeding compared to mothers who are too young and too old. This is due to several factors, including the increasing readiness of postpartum mothers in that age range. In addition, mothers aged 20-35 years also tend to consult with medical personnel more often and participate in health programs that provide education about the benefits of exclusive breastfeeding. This study is also supported by findings from Lawal, et.al (2017) which showed that the adult age group is more responsive to health information, including about exclusive breastfeeding, due to better emotional and cognitive maturity factors. Thus, it can be concluded that age is one of the important factors that contributes to increasing knowledge about exclusive breastfeeding (14).

Several studies have shown that there is a significant relationship between maternal age and knowledge about exclusive breastfeeding. A study conducted by Dukuzumuremyi et al (2020) in East Africa found that younger mothers had better knowledge about the benefits of exclusive breastfeeding than older mothers. This is thought to be because young mothers receive more information through visits to health facilities and are exposed to more modern sources of information about exclusive breastfeeding (18). In addition, differences in cultural practices also influence knowledge and implementation of exclusive breastfeeding in different age groups. Reddy et. Al's (2023) study in India also supports similar findings, showing that younger mothers, especially those who attend regular antenatal visits, are more likely to know and practice exclusive breastfeeding during the first six months. Factors such as maternal education, access to medical information, and social support play a major role in influencing breastfeeding behavior in different age groups. (19).

**Table 6. Relationship between Education and Postpartum Mothers' Knowledge of Exclusive Breastfeeding in the Tuntungan Health Center Work Area**

Education	Knowledge				p
	Not Good		Good		
	n	%	n	%	
Low	11	68.7	5	31.3	0.026
High	14	41.2	20	58.8	

Based on the table above, it can be seen that in postpartum mothers with low education, more have not good knowledge, namely 68.7%, in postpartum mothers with high education, more have good knowledge, namely 58.8%. The results of the Chi-square statistical analysis show that there is a relationship between age and postpartum mothers' knowledge of exclusive breastfeeding in the Tuntungan Health Center Work Area with a p-value = 0.026. The results of this study are in line with the research of Lindawati, et al. (2019) in Peucangpari Village, Cigemblong District, which stated that there is a relationship between education and exclusive breastfeeding. Where sufficient education will make it easier for someone to receive information about the benefits of exclusive breastfeeding from various sources so that their knowledge increases (20).

Education plays an important role in increasing public knowledge and awareness of the importance of exclusive breastfeeding. Mothers with higher levels of education tend to have better knowledge of the benefits of exclusive breastfeeding, such as protection against infection, improving the baby's immune system, and reducing the risk of malnutrition. This knowledge plays a role in mothers' decisions to exclusively breastfeed for the first six months of a baby's life, as recommended by the World Health Organization (WHO). Research shows that mothers with better access to formal education and health information, whether through schools, health services, or the media, are more likely to be successful in exclusively breastfeeding. In addition, education also allows mothers to understand challenges that may arise during the breastfeeding period, such as time constraints or lactation problems, and provide appropriate solutions to overcome them. Educational programs provided by health workers are also very helpful in emphasizing the importance of exclusive breastfeeding for the baby's long-term health. This suggests that education is a key factor in encouraging exclusive breastfeeding practices among new mothers (21).

**Table 7. Relationship between Parity and Postpartum Mothers' Knowledge of Exclusive Breastfeeding in the Tuntungan Health Center Work Area**

Parity	Knowledge				p
	Not Good		Good		
	n	%	n	%	
≤2	22	68.7	10	31.3	0.008
>2	6	33.3	12	66.7	

Based on the table above, it can be seen that in postpartum mothers who have a parity of ≤2, more people have not good knowledge, namely 68.7%, in postpartum mothers who have a parity of >2, more people have good knowledge, namely 66.7%. The results of the Chi-square

statistical analysis show that there is a relationship between age and postpartum mothers' knowledge of exclusive breastfeeding in the Tuntungan Health Center Work Area with a p-value = 0.026. The results of this study are in line with the research of Indriani, et al. (2022) in Nganjuk Regency which stated that there is a relationship between parity and exclusive breastfeeding in infants with  $p = 0.0001$  (22).

Parity, or the number of births experienced by a mother, can affect knowledge and practices of exclusive breastfeeding. Mothers with higher parity generally have more experience in caring for babies, including breastfeeding. Studies show that mothers with first children are often less experienced and tend to face more challenges in exclusive breastfeeding compared to mothers with second or third children, who tend to be more confident due to previous experience. However, knowledge about the importance of exclusive breastfeeding is also influenced by access to information, education, and support from the environment, such as health workers. Although parity plays a role in improving practical skills, in-depth knowledge about the benefits of exclusive breastfeeding often depends on the education received by mothers, regardless of the number of children they have. Continuous educational support is still needed for all mothers, both primiparous and multiparous, to ensure the success of exclusive breastfeeding (23).

#### **4. CONCLUSION AND SUGGESTIONS**

Based on research conducted on postpartum mothers in the Tuntungan Health Center working area, it can be seen that more postpartum mothers are aged 20-35 years, namely 24 people (48.0%), more postpartum mothers have higher education, namely 34 people (68.0%), more postpartum mothers have parity  $\leq 2$  people, namely 32 people (64.0%), more postpartum mothers have not good knowledge, namely 27 people (54.0%). There is a relationship between age ( $p = 0.015$ ), education ( $p = 0.026$ ), parity ( $p = 0.008$ ) with the knowledge of postpartum mothers in the Tuntungan Health Center Working Area. It is recommended that postpartum mothers, especially in the Tuntungan Health Center Working Area, be proactive in seeking information and increasing knowledge about exclusive breastfeeding, starting from the benefits of providing exclusive breastfeeding for babies, mothers and families as well as information related to how to increase breast milk production. It is recommended that health workers continue to encourage postpartum mothers to provide exclusive breastfeeding to their babies so that the baby's health status can be improved.

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